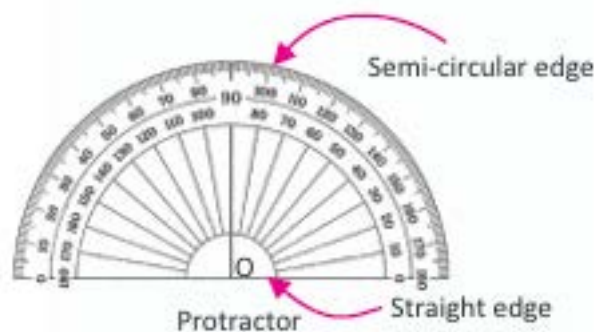


Measuring an Angle

Understanding the Topic

- Angles are measured using a tool called a protractor.
- The unit used for measuring angles is degrees ($^{\circ}$).
- A protractor has markings from 0° to 180° .
- The center point of the protractor is placed on the vertex of the angle.
- One arm of the angle is placed along the base line (0° line).
- The measurement is read where the second arm meets the number scale.



Steps to Measure an Angle

- **Step 1:** Place the center of the protractor on the vertex of the angle.
- **Step 2:** Align one arm of the angle with the 0° line.
- **Step 3:** Look at where the other arm crosses the number scale.
- **Step 4:** Read the correct scale (inner or outer) depending on the direction of the angle.

Examples with Solutions

1. Measure a right angle

Place protractor on the vertex and align one arm at 0°

The other arm points at 90°

Answer: 90°

2. Measure an acute angle

One arm at 0° , other arm at 45°

Answer: 45° (Acute angle)



3. Measure an obtuse angle

One arm at 0° , other arm at 120°

Answer: 120° (Obtuse angle)

4. Measure a straight angle

A straight line makes an angle of 180°

Answer: 180°

5. Measure an angle using outer scale

Vertex on center, one arm at 0° on outer scale

Other arm crosses at 135° on outer scale

Answer: 135°

Summary Points

- Angles are measured in degrees ($^\circ$) using a protractor.
- Place the protractor's center on the vertex and align one arm with 0° .
- Read the scale where the other arm points.
- Right angle = 90° , Acute $< 90^\circ$, Obtuse $> 90^\circ$.
- Example: Angle showing 45° = acute angle.